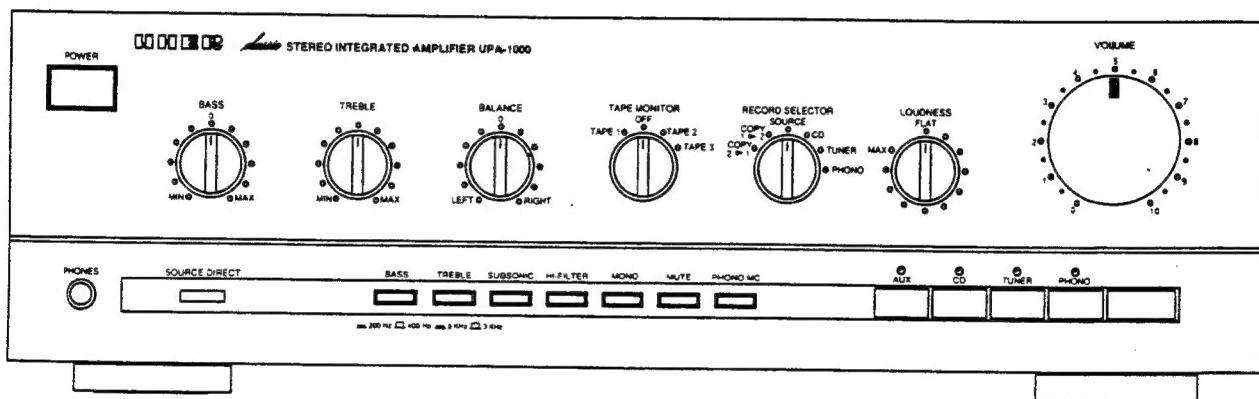


SERVICE MANUAL

UPA-1000

PRE AMPLIFIER



SPECIFICATIONS

● Amplifier Section

Input sensitivity impedance
Phono MC.....0.22mV / 100
Phono MM.....2.5mV / 47k
Tuner,CD,AUX Tape.....150mV / 47k
Frequency response (high level inputs,-3dB)
.....5-90000Hz
Linearity (20Hz-20000Hz).....+ / -0.5dB

Signal to noise potential ratio (UA=1V, A valued)
Phono MC.....75dB
Phono MM.....85dB
Tuner, CD,AUX,Tape.....100dB

Saturation resistivity
Phono MC.....15mV
Phono MM.....180mV
Tuner, CD,AUX,Tape.....12V

Total non-linear distortion factor (1 kHz).....0.01%

Tone Control
Bass 50Hz](Turnover OFF)+ / + 10dB
Treble 10Hz](Turnover OFF)+ / - 10dB

Bass 20Hz](Turnover ON)+ / - 10dB
Treble 20Hz](Turnover ON)+ / - 10dB

Loudness
100Hz.....+ 10dB
10KHz.....+ 4dB
Filters
Subsonic.....-18dB / oct,(20Hz)
High.....-12dB / oct,(10Hz)

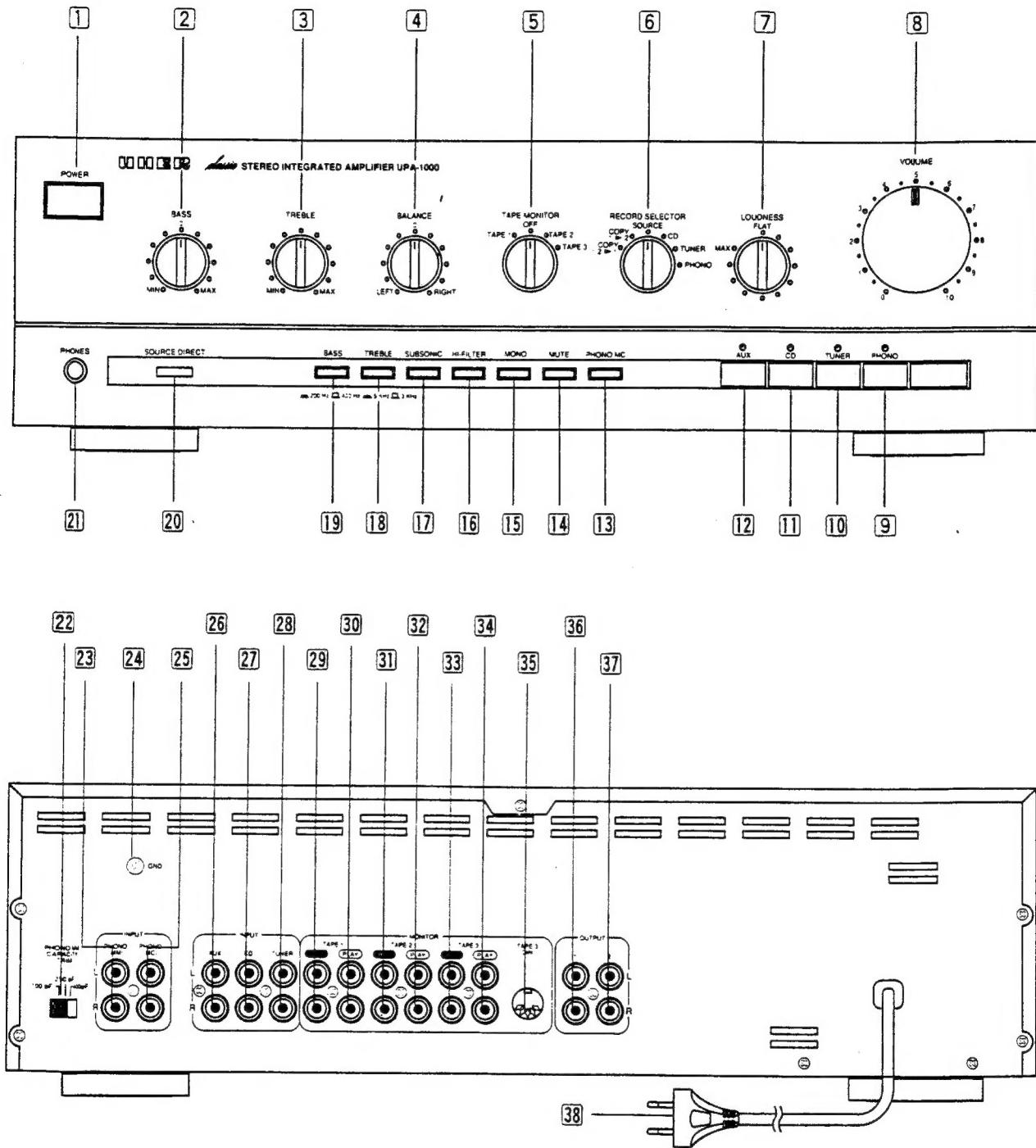
● Miscellaneous

POWER requirements.....AC230V,50Hz
POWER consumption.....18W
Dimensions (W×H×D height without footing)
.....435 × 120 × 250mm
Weight(net).....4.1kg

● Furnished parts

operation instructions.....1

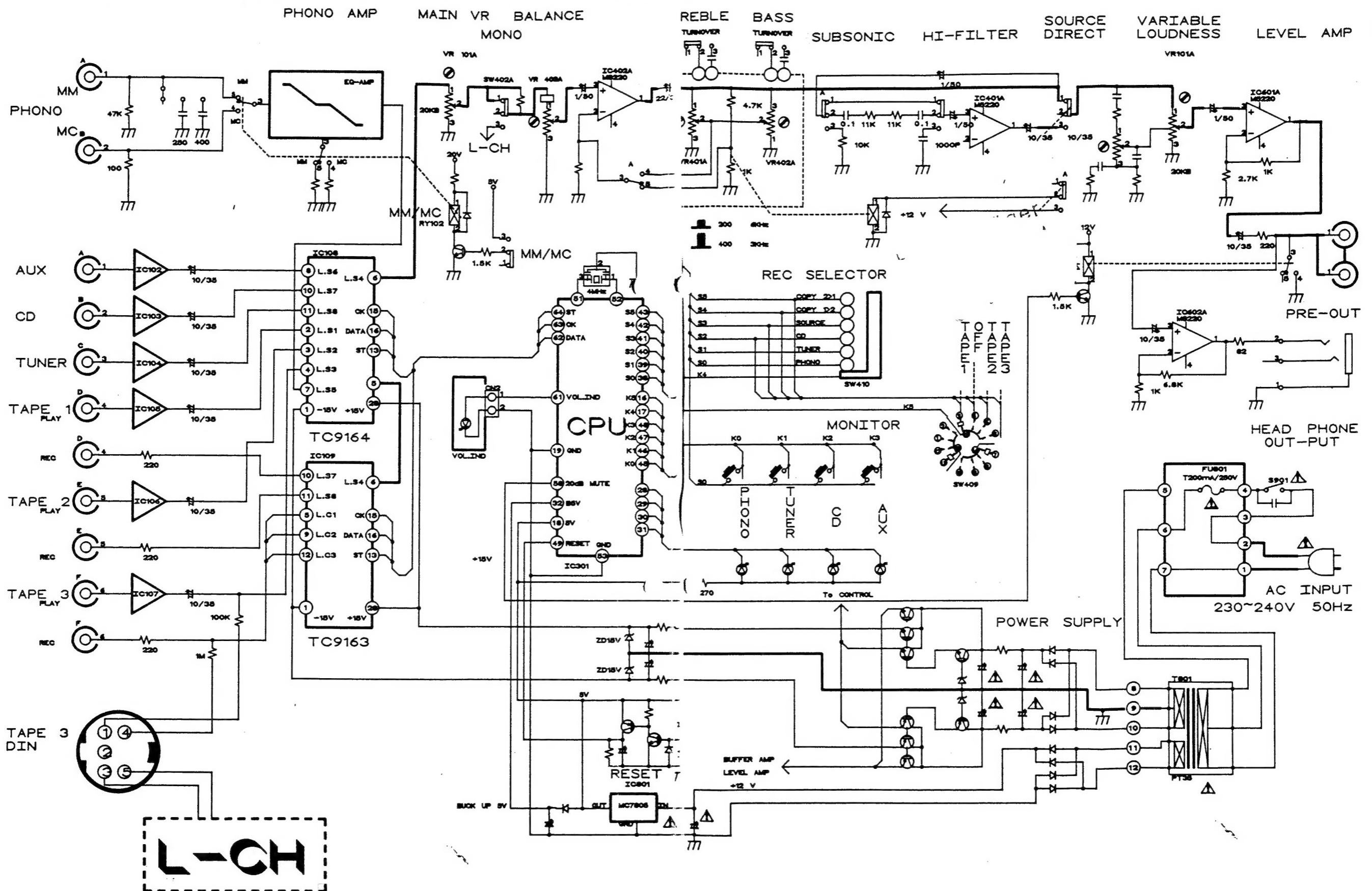
FRONT PANEL FEATURES



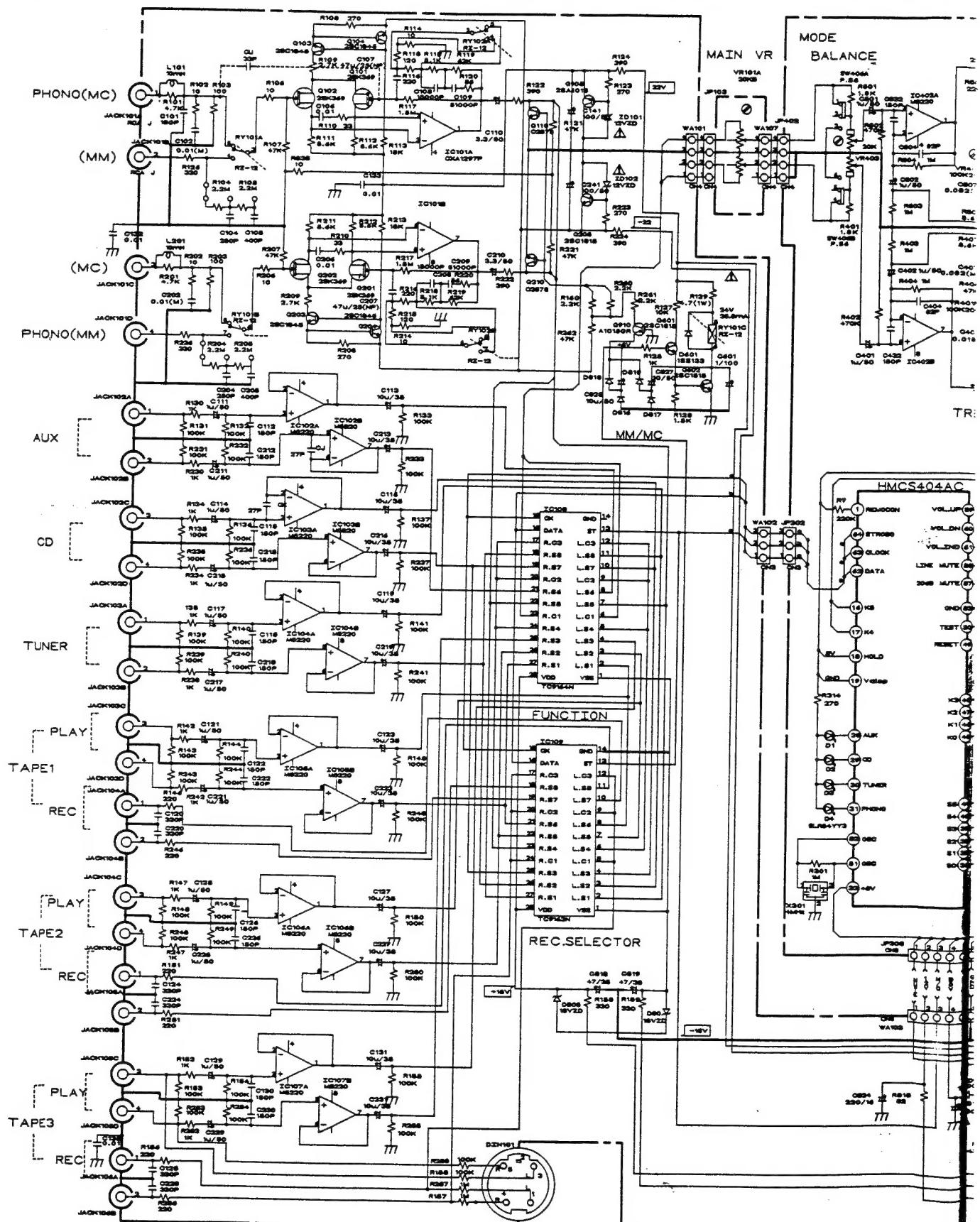
Designation	INSCRIPTION	
①. Mains key	POWER	
		With this key you switch the unit on or off.
② Bass control	BASS	
		With this control you set the proportion of low frequencies.
③ Treble control	TREBLE	
		With this control you set the proportion of high frequencies.
④ Balance control	BALANCE	
		With this control you set the volume ratio between the two stereo channels.
⑤. Monitor switch	TAPE MONITOR	
		With this switch you determine from which tape device you want to replay.
⑥. Recording selector switch	RECORD SELECTOR	
		With this selector switch you determine which program source you want to record.
⑦. Control for aurally compensated volume adjustment	LOUDNESS	
		When this control is turned out of its FLAT position the highest and lowest frequencies at low volumes are amplified a bit more than the rest in order to compensate the smaller sensitivity of the human ear for low volumes in these ranges. When turned to the position MAX this effect reaches its maximum, in the position FLAT the function is eliminated completely.
⑧. Volume control	VOLUME	
		With this control you set the total volume.
⑨. Phono key	PHONO	
		You press this key if you want to replay disks on a record player connected to the outlets 23 or 25.
⑩. Tuner key	TUNER	
		For radio reception via a radio receiver (tuner) connected to the outlets 28 you press this key.
⑪. CD key	CD	
		For replay from a compact disk player connected to the outlets 27 you press this key.
⑫. Key for additional program source	AUX	
		For replay from a program source connected to the outlets 26 you press this key.
⑬. Phono selector switch	PHONO MC	
		For replay from a record player with a so-called moving coil system this key must be pressed.
⑭. Mute key	MUTE	
		When this key is pressed the volume is reduced considerably.
⑮. Operation mode selector	MONO	
		With this key you select one of the modes stereo (key not pressed) or mono (key pressed), respectively.
⑯. Noise filter	HI FILTER	
		You press this key to suppress disturbances in the upper frequency range (noise etc.).
⑰. Rumble filter	SUBSONIC	
		For suppressing noises in the lowest frequency ranges (caused by wavy disks etc.) you press this key.
⑱. Selector switch for treble control	TURNOVER TREBLE	
		With this switch you select the starting frequency of the treble control.
⑲. Selector switch for bass control	TURNOVER BASS	
		With this switch you select the starting frequency of the bass control.
⑳. On/off switch for sound control	SOURCE DIRECT	
		When this key is pressed the sound controls 2 and 3 are not active.
㉑. Headphone outlet	PHONES	
		You can connect stereo headphones provided with a suitable plug to this outlet.
㉒. Capacity selector switch	PHONO CAPACITIY TRIM	
		With this switch you can set the unit to the capacity recommended by the manufacturer of your pick-up system.

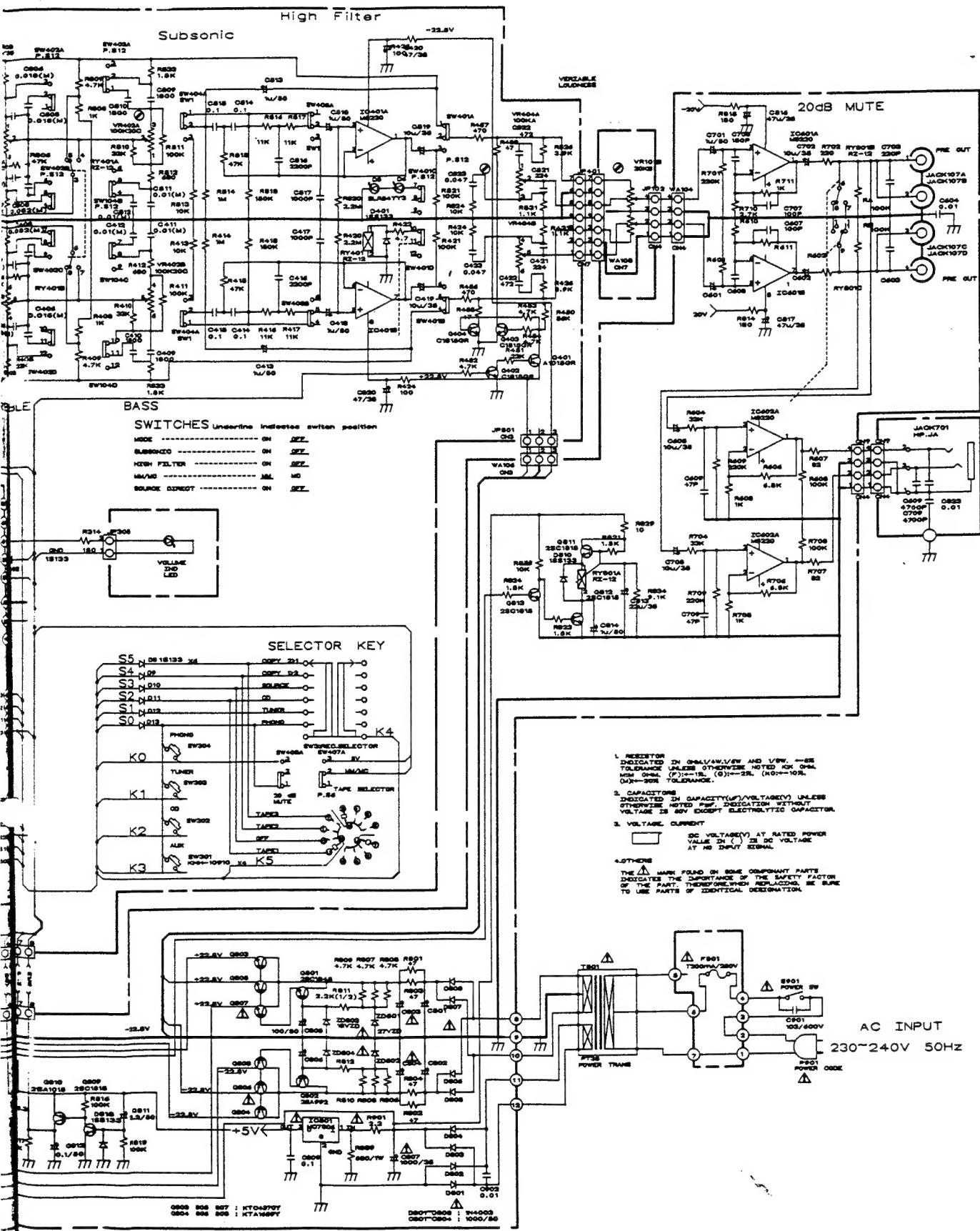
- 23.** Phono outlets MM **PHONO MM**
 If your record player is equipped with a moving magnet system you connect it to these outlets.
- 24.** Ground terminal **GND**
 If your record player is equipped with a ground cable you connect it to this terminal clamp.
- 25.** Phono outlets MC **PHONO MC**
 If your record player is equipped with a moving coil system you connect it to these outlets.
- 26.** Outlets for additional program source **AUX**
 To these outlets you can connect an additional high level program source (for ex. an additional tape or cassette device or a DAT-recorder) for replay.
- 27.** CD outlets **CD**
 Connect a compact disc player to these outlets.
- 28.** Tuner outlets **TUNER**
 Connect your tuner to these outlets.
- 29.** Recording outlets [Tape recorder 1] **TAPE 1 REC**
 Connect these outlets to the LINE-input outlets of your tape device (tape or cassette recorder, DAT-recorder).
- 30.** Replay outlets [tape device 1] **TAPE 1 PLAY**
 Connect these outlets to the LINE-output outlets of your second tape device (tape or cassette recorder, DAT-recorder).
- 31.** Recording outlets [Tape recorder 2] **TAPE 2 REC**
 Connect these outlets to the LINE-input outlets of your second tape device (tape or cassette recorder, DAT-recorder).
- 32.** Replay outlets [tape device 2] **TAPE 2 PLAY**
 Connect these outlets to the LINE-output outlets of your second tape device (tape or cassette recorder, DAT-recorder).
- 33.** Recording outlets [Tape recorder 3] **TAPE 3 REC**
 Connect these outlets to the LINE-input outlets of your third tape device (tape or cassette recorder, DAT-recorder).
- 34.** Replay outlets [tape device 3] **TAPE 3 PLAY**
 Connect these outlets to the LINE-output outlets of your third tape device (tape or cassette recorder, DAT-recorder).
- 35.** DIN-outlet
 You can connect a tape device equipped with DIN-outlets to this outlet which is suitable for recording as well as for replay.
- 36.** Output outlets 1 **OUTPUT 1**
 Connect these outlets to the input outlets of your final amplifier.
- 37.** Output outlets 2 **OUTPUT 2**
 To these outlets you can connect a second final amplifier.
- 38.** Mains cable **POWER IN**
 The plug of this cable must be put into a 220V ~ 230V/50Hz mains socket.

BLOCK DIAGRAM



SCHEMATIC DIAGRAM





1. RESISTOR INDICATED IN OHM/VW AND V/W. —% TOLERANCE UNLESS OTHERWISE NOTED. (K) = 10%, (M) = 20%, (S) = 25%. (N) = 10%, (D) = 20% TOLERANCE.

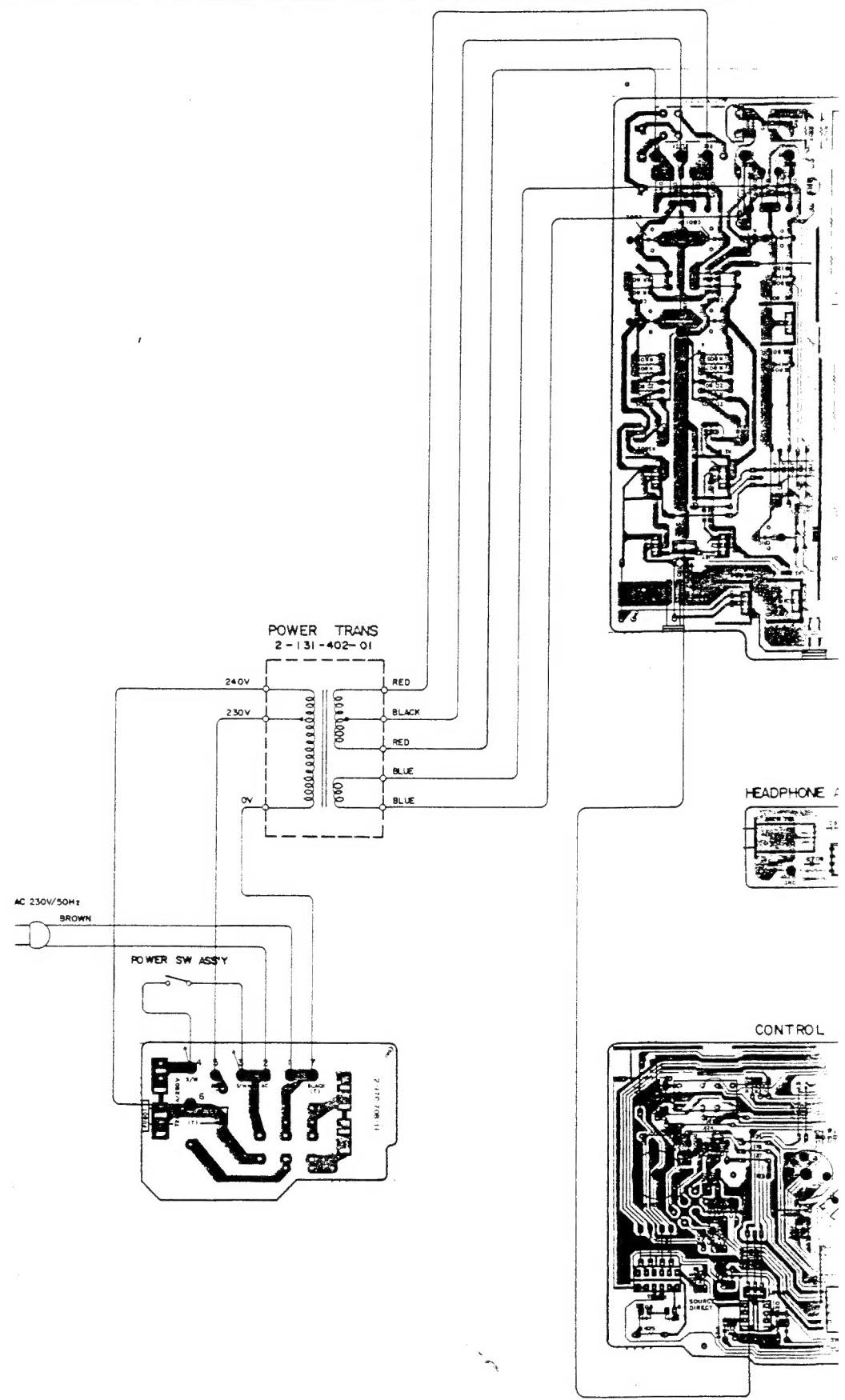
2. CAPACITOR INDICATED IN CAPACITY(μF)/VOLTAGE(V). UNLESS OTHERWISE NOTED, CAPACITOR INDICATION IS FOR 50V. EXCEPT ELECTRICAL FITTING, VOLTAGE IS 50V.

3. VOLTAGE CURRENT

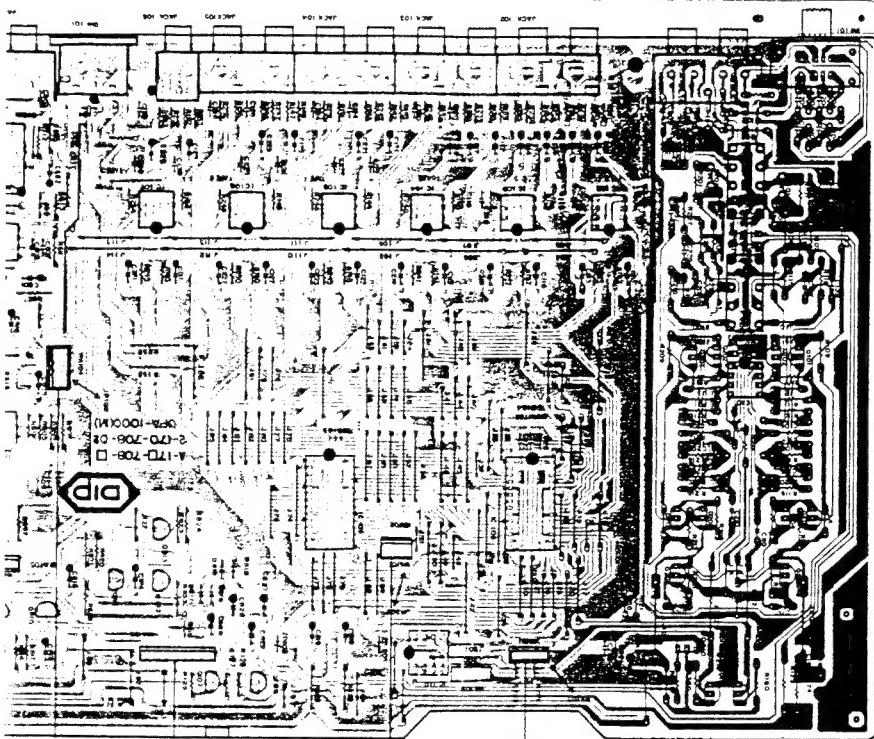
DC VOLTAGE(V) AT RATED POWER VALUE IN () IN DC VOLTAGE AT NO INPUT SIGNAL.

4. OTHERS ▲ MARK FOUND ON SOME COMPONENT PARTS INDICATES THE IMPORTANCE OF THE SAFETY FACTOR OF THE PART. THEREFORE, WHEN REPLACING, BE SURE TO USE PARTS OF IDENTICAL DESIGNATION.

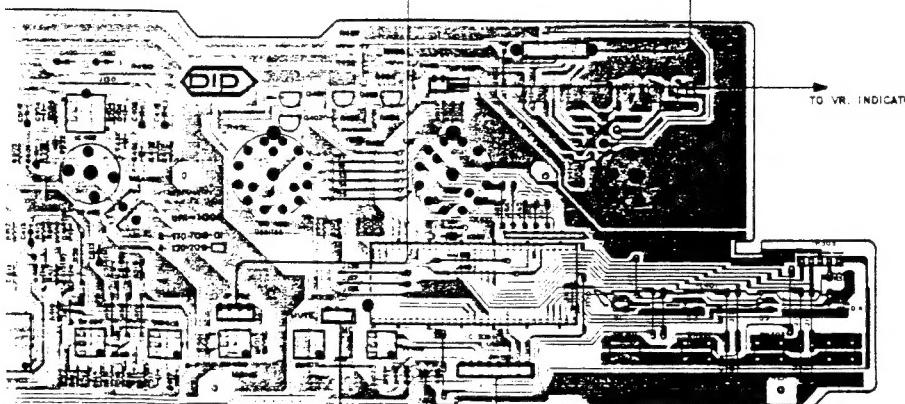
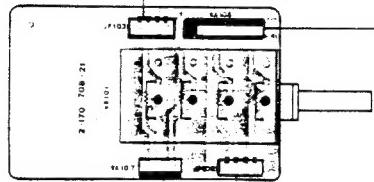
WIRING DIAGRAM



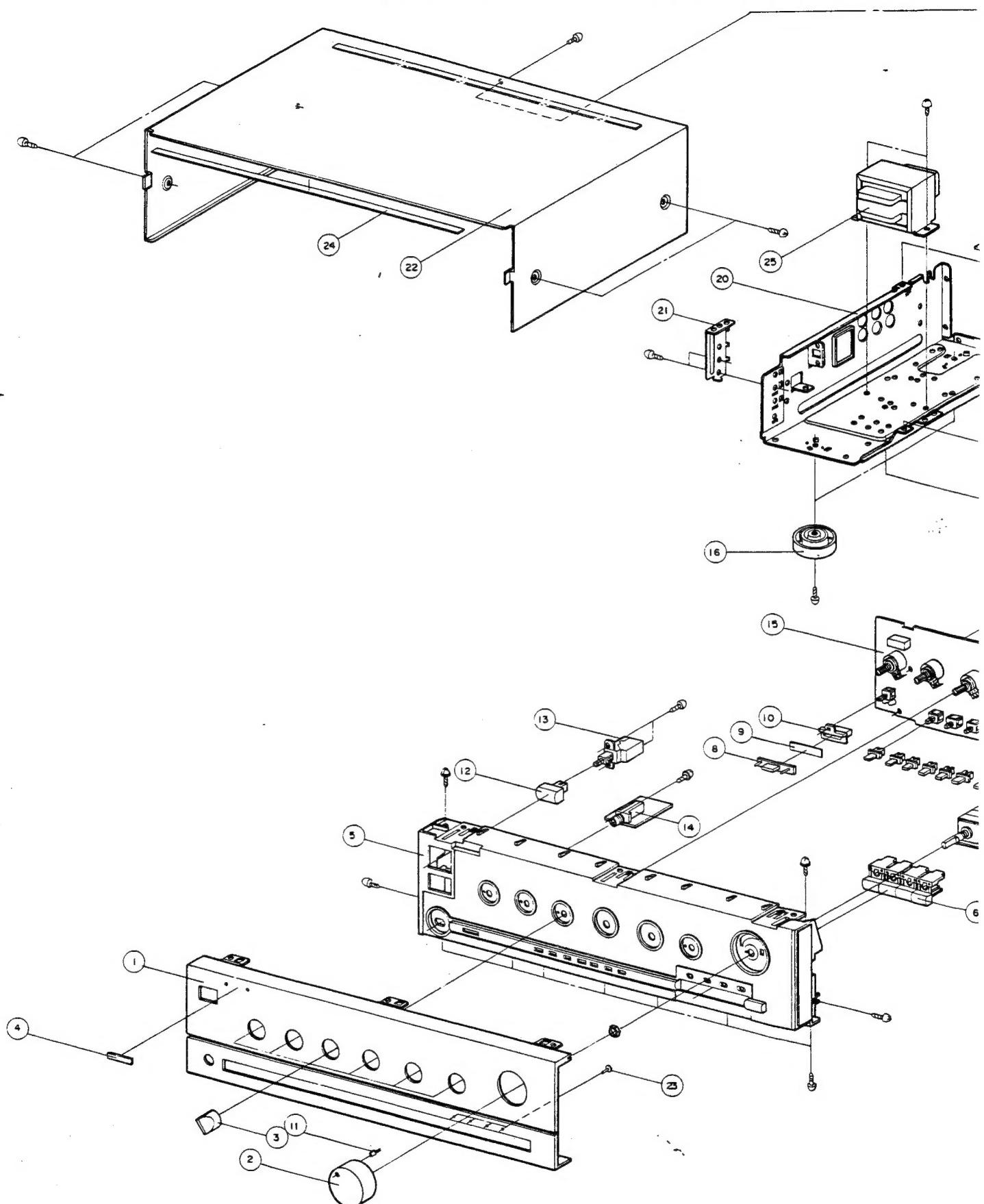
MAIN ASS'Y

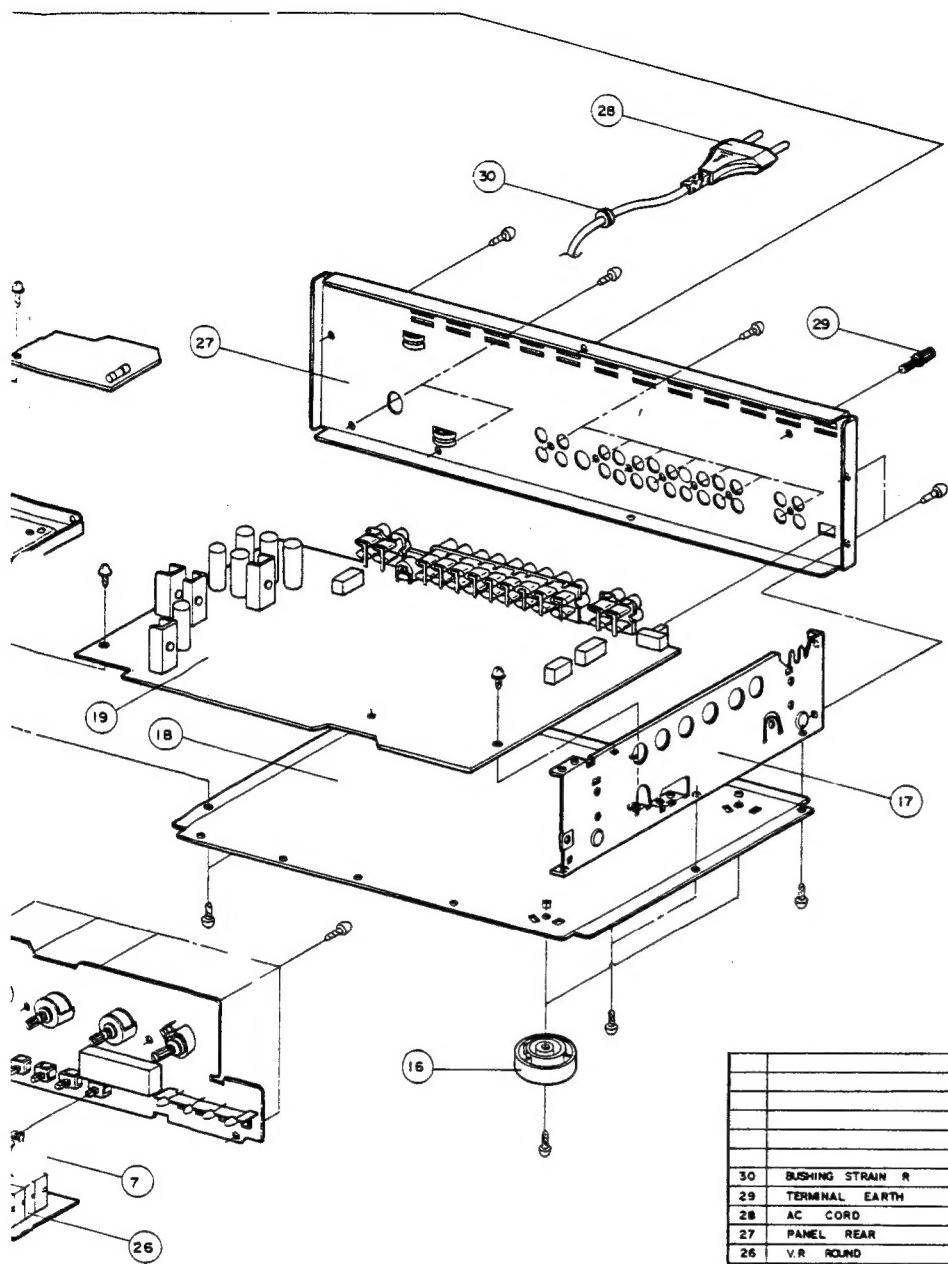


VOLUME ASS'Y



EXPLODED VIEW





NO.	PARTS NAME	PARTS NO.	MATERIAL	Q'TY
30	BUSHING STRAIN R	6-201-115-01		1
29	TERMINAL EARTH	2-155-747-01		1
28	AC CORD	2-211-109-02		1
27	PANEL REAR	3-121-003-01	SECC	1
26	V.R ROUND	2-501-349-01		1
25	TRANS POWER	2-131-402-01		1
24	FELT BLACK GRILL	3-730-116-01	FELT	2
23	LENS	3-116-106-01	ACRYL	4
22	CASE BONNET	3-121-007-01	SECC + PVC	1
21	PANEL BRKT	3-116-117-02	SECC	1
20	FRAME SIDE L	3-121-010-01	SECC	1
19	PCB UNIT ASS'Y	A-170-708-01		1
18	BOTTOM PLATE	3-121-008-01	SECC	1
17	FRAME SIDE R	3-121-009-01	SECC	1
16	FOOT ASS'Y	3-120-621-01	HIPS + TPR	4
15	PCB UNIT ASS'Y	A-170-709-01		1
14	JACK HEADPHONE	2-153-616-01		1
13	S/W PUSH	2-202-210-01		1
12	KNOB POWER	3-214-504-01	ABS	1
11	LED	2-419-041-31		1
10	KNOB BASE	3-120-609-01	ABS	1
9	FILTER DIRECT	3-120-624-01	PE FILM	1
8	KNOB DIRECT	3-120-608-01	ACRYL	1
7	KNOB PUSH	3-120-606-01	ABS	7
6	KNOB STATION	3-214-602-01	ABS	1
5	BASE PANEL	3-121-002-01	ABS	1
4	BADGE	3-120-622-01	ADTO-P	1
3	KNOB ROTARY	3-120-604-01	ABS	6
2	KNOB VOLUME	3-120-616-01	ABS	1
1	PANEL FRONT	3-121-001-01	A6063-T5	1